

S/N 10/583,681

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=> set plurals on perm
SET COMMAND COMPLETED

=> set abbr on perm
SET COMMAND COMPLETED

=> file uspatall caplus japiro
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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

FILE 'USPATFULL' ENTERED AT 16:11:31 ON 14 JUN 2007
CA INDEXING COPYRIGHT (C) 2007 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 16:11:31 ON 14 JUN 2007
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FILE 'CAPLUS' ENTERED AT 16:11:31 ON 14 JUN 2007
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=> S CYANO(1W) DITHIOCARBOXYLIC(2W) ESTER###
L1 1 CYANO(1W) DITHIOCARBOXYLIC(2W) ESTER###

=> d.l1.1.ihib. abs

L1 ANSWER 1 OF 1 USPATELLI on STN

ACCESSION NUMBER: 3007.101381 USE RATEFILL

ACCESSION NUMBER: 2007-101291 USPA/Full
TITLE: Low odor chain transfer agents for controlled radical

Low order chain polymerization

INVENTOR(S) : Benicewicz, Brian, Loudonville, NY, UNITED STATES
Li, Chunzhao, Troy, NY, UNITED STATES

	NUMBER	KIND	DATE
PATENT INFORMATION:	US 2007088140	A1	20070419
APPLICATION INFO.:	US 2004-583681	A1	20040527 (10)
	WO 2004-US16718		20040527
			20061218 PCT 371 date

	NUMBER	DATE
PRIORITY INFORMATION:	US 2003-474538P	20030530 (60)
DOCUMENT TYPE:	Utility	
FILE SEGMENT:	APPLICATION	

S/N 10/583,681

LEGAL REPRESENTATIVE: HESLIN ROTHENBERG FARLEY & MESITI PC, 5 COLUMBIA CIRCLE, ALBANY, NY, 12203, US

NUMBER OF CLAIMS: 18

EXEMPLARY CLAIM: 1

LINE COUNT: 754

AB The present invention relates to low odor α - cyano-dithiocarboxylic ester compounds of formula I for use as chain transfer agents in free radical polymerizations, and polymerization processes employing them: ##STR1## wherein

R.sup.1 is selected from alkyl, substituted alkyl, heteroaryl, substituted heteroaryl, alkylaryl, substituted alkylaryl, aryl, substituted aryl, alkoxy, aryloxy, thioalkyl, thioaryl, substituted thioalkyl, substituted thioaryl, secondary amino and tertiary amino;

R.sup.2 is selected from alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, and COOR.sup.3; and

R.sup.3 is alkyl.

=> s cyano(3w)dithiocarboxylic(2w)ester###

L2 1 CYANO(3W) DITHIOCARBOXYLIC(2W) ESTER###

=> s cyan?(3w)dithiocarboxylic(2w)ester###

L3 3 CYAN?(3W) DITHIOCARBOXYLIC(2W) ESTER###

=> d l3 1-3 ibib abs

L3 ANSWER 1 OF 3 USPATFULL on STN

ACCESSION NUMBER: 2007:101291 USPATFULL

TITLE: Low odor chain transfer agents for controlled radical polymerization

INVENTOR(S): Benicewicz, Brian, Loudonville, NY, UNITED STATES
Li, Chunzhao, Troy, NY, UNITED STATES

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R.sup.1 is selected from alkyl, substituted alkyl, heteroaryl, substituted heteroaryl, alkylaryl, substituted alkylaryl, aryl, substituted aryl, alkoxy, aryloxy, thioalkyl, thioaryl, substituted thioalkyl, substituted thioaryl, secondary amino and tertiary amino;

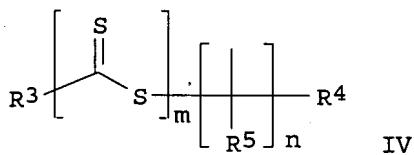
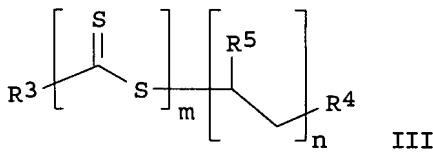
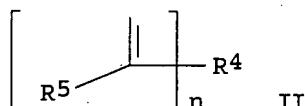
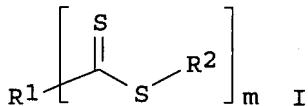
R.sup.2 is selected from alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, and COOR.sup.3; and

S/N 10/583,681

R.sup.3 is alkyl.

L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 2002:123624 CAPLUS
DOCUMENT NUMBER: 136:167802
TITLE: Dithiocarboxylic ester synthetic process
INVENTOR(S): Benicewicz, Brian C.; Kanagasabapathy, Subbareddiar; Sudalai, Arumugam
PATENT ASSIGNEE(S): Rensselaer Polytechnic Institute, USA
SOURCE: U.S. Pat. Appl. Publ., 11 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2002019554	A1	20020214	US 2001-877455	20010608
US 6458968	B2	20021001		
PRIORITY APPLN. INFO.:			US 2000-210517P	P 20000609
OTHER SOURCE(S):	MARPAT	136:167802		
GI				



AB A process the preparation of a dithiocarboxylic esters comprises reacting a carboxylic acid compound $R^1(COOH)_m$, R^2AH , and phosphorus pentasulfide to produce a compound of structure (I), wherein $R^1 = m$ -valent radical selected from alkyl, substituted alkyl, aryl, substituted aryl, heteroaryl, and substituted heteroaryl, $R^2 =$ alkyl, substituted alkyl, aryl, substituted aryl, heteroaryl, and substituted heteroaryl, $A = S$ or O , and $m =$ an integer 1-6. An alternate process comprises reacting $R^3(COAH)_m$ and a compound of structure (II) in the presence of a clay catalyst; and treating products of the reaction with a thiating agent to produce a compound of structure (III), a compound of structure (IV), or a combination of compds. of III and IV, wherein $R^3 = n$ -valent radical selected from alkyl, substituted alkyl, aryl, substituted aryl, heteroaryl, and substituted heteroaryl, $R^4 =$ alkyl, substituted alkyl, aryl, substituted aryl, heteroaryl, and substituted heteroaryl, $R^5 = H$ or lower alkyl, $A = S$ or O , and $m, n =$ independently integers 1-6 with when $m > 1$, $n = 1$ and $n > 1$, $m = 1$. This class of compds. may be used as chain transfer agent for RAFT polymerization

Thus, benzoic acid 1.22, benzyl mercaptan 1.24, and phosphorus pentasulfide 4.44 g in 40 mL toluene were refluxed for 10 h to give benzyl dithiobenzoate.

S/N 10/583,681

L3 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 1972:14419 CAPLUS
DOCUMENT NUMBER: 76:14419
TITLE: 2,2'-Iminobis(benzothiazole) from cyanoimido
-dithiocarboxylic acid esters
AUTHOR(S): Neidlein, Richard; Reuter, Hans
CORPORATE SOURCE: Pharm.-Chem. Inst., Univ. Karlsruhe, Karlsruhe, Fed.
Rep. Ger.
SOURCE: Synthesis (1971), (10), 540-1
CODEN: SYNTBF; ISSN: 0039-7881
DOCUMENT TYPE: Journal
LANGUAGE: German
GI For diagram(s), see printed CA Issue.
AB (MeS)2C:NCN in EtOH is treated with o-HSC6H4NH2 to prepare
2,2'-imino(benzothiazole) (I, R = H). This is treated (in dioxane)
with Na and MeI or an analogous compound to prepare I [R = Me, CN, CH2CO2Et,
allyl, C(S)Cl, or CH2Ac]. 2-Amino-5-methylbenzenethiol-HCl is added to Na
in EtOH and then treated with (MeS)2C:NCN to yield 2,2'-imino(6-
methylbenzothiazole) as the acetate. 2-Cyanoimino-3-methylbenzothiazoline
in EtOH is refluxed with o-HSC6H4NH2 to prepare
2-(2-benzothiazolylimino)-3-methyl-benzothiazoline.

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L3 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2007 ACS on STN
IT 62-23-7, 4-Nitrobenzoic acid 65-85-0, Benzoic acid, reactions 79-09-4,
Propionic acid, reactions 80-62-6, Methyl methacrylate 98-83-9,
 α -Methylstyrene, reactions 98-91-9, Thiobenzoic acid 100-09-4,
4-Methoxybenzoic acid 100-42-5, Styrene, reactions 100-51-6, Benzyl
alcohol, reactions 100-53-8, Benzyl mercaptan 107-03-9, 1-Propanethiol
108-98-5, Thiophenol, reactions 455-24-3, 4-(Trifluoromethyl)benzoic
acid 456-22-4, 4-Fluorobenzoic acid 592-41-6, 1-Hexene, reactions
619-65-8, 4-Cyanobenzoic acid 622-97-9, p-Methylstyrene
1314-80-3, Phosphorus pentasulfide
RL: RCT (Reactant); RACT (Reactant or reagent)
(dithiocarboxylic ester synthetic process)

=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	34.92	35.13
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-1.56	-1.56

STN INTERNATIONAL LOGOFF AT 16:14:34 ON 14 JUN 2007

WEST Search History

DATE: Thursday, June 14, 2007

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DB=PGPB,USPT; PLUR=YES; OP=OR

<input type="checkbox"/>	L2	(558/238)![CCLS]	94
<input type="checkbox"/>	L1	(526/220)![CCLS]	698

END OF SEARCH HISTORY